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THE
PALÆONTOGRAPHICAL SOCIETY.

INSTITUTED MDCCCLVII.

VOLUME FOR 1908.

LONDON:

MDCCCXVIII.

TYPE SPECIMENS OF INFERIOR OOLITE AMMONITES.

THE type specimens of *Ammonites concavus*, *A. murchisonæ*, *A. striatulus*, and *A. jugosus*, originally described and figured by the Sowerbys in their 'Mineral Conchology,' have already been re-figured and discussed by Mr. S. S. Buckman in his 'Monograph of the Ammonites of the Inferior Oolite Series,' vol. i, published by the Palæontographical Society in parts between 1887 and 1907. The type specimens of the other species in the Sowerby Collection are now illustrated by new figures in the accompanying seven plates. It has been deemed useful to reprint the original descriptions for reference.

It has not been possible to trace the type specimens of *Ammonites braikenridgii*, *A. brongniarti*, *A. contractus*, and *A. gervillii*.

LIST OF PLATES.

- I.—*Ammonites banksii*.
- II.— „ *blagdeni*.
- III.— „ „ and *A. banksii*, with text-figures of *A. sowerbii*.
- IV.— „ *brocchii*.
- V.— „ *brodiæi* and *A. parkinsoni*.
- VI.— „ *læviusculus*, *A. subradiatus*, *A. corrugatus*, and *A. browni*.
- VII.— „ *humphriesianus* and *A. brodiæi*.

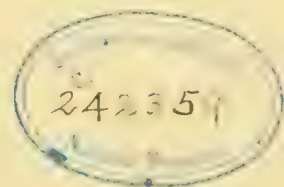
Unless otherwise stated, the figures are of the natural size.

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ILLUSTRATIONS
OF
TYPE SPECIMENS
OF
INFERIOR OOLITE AMMONITES
IN THE SOWERBY COLLECTION.

12

William D. Woodward
EDITED BY THE SECRETARY.



LONDON:
PRINTED FOR THE PALÆONTOGRAPHICAL SOCIETY.
1908.

PRINTED BY ADLARD AND SON, LONDON AND DORKING.

The Palæontographical Society is indebted to Mr. S. S. Buckman, F.G.S., for assistance kindly rendered in the preparation of several of these Plates.

PLATE I.

Ammonites banksii, J. Sowerby, Min. Conch., vol. ii, p. 229, 1818, pl. cc.

[Brit. Mus. no. 43910.]

“*Specific Characters*.—Discoid, very thick; inner turns exposed; sides concave, largely tuberculated; front fluted, slightly convex; aperture transverse, almost three times as long as wide.

“A very bold formed shell; the narrow sides of the whorls are much relieved from each other, they are convex, and occupied by about 10 large obtuse tubercles: the great width of the convex margin, which is obtusely fluted, gives the whole a very massive appearance. There are about five turns, the last but one is in diameter equal to the thickness of the whole.

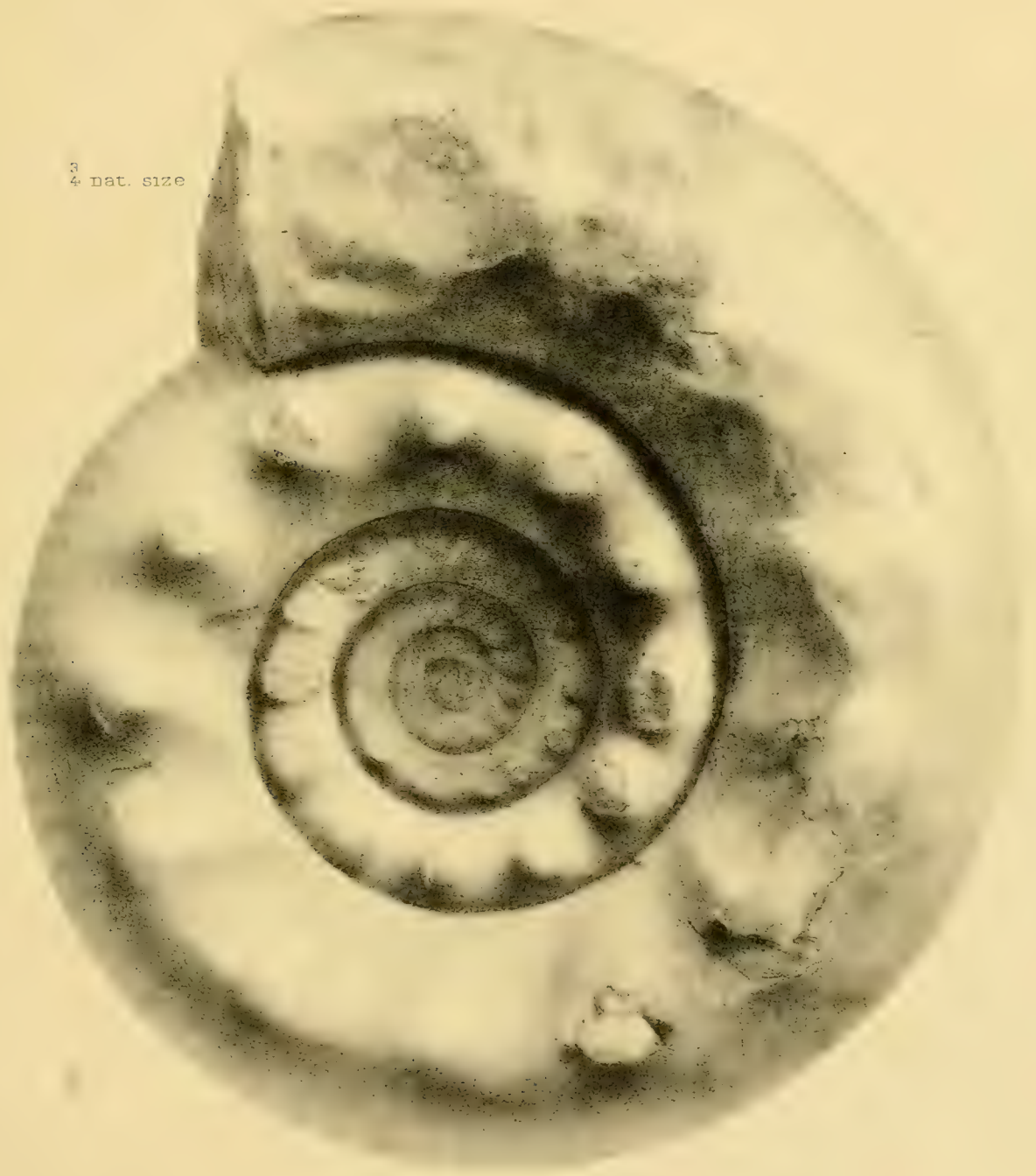
“In a valuable packet of fossils belonging to the Inferior Oolite, sent by some disinterested friend at present unknown to me, from the west of England, was the ponderous mass represented in this plate; it contains the ferruginous grains peculiar to that rock, with Belemnites, fragments of other shells, and also a piece of wood, changed almost into charcoal. I hope my friend will make himself known, and communicate the locality.

“I have indulged my feelings of esteem and friendship, by giving this magnificent Ammonite the name of that staunch supporter of science in general, and of natural history in particular, who has presided so long and so ably over the Royal Society.”

[See also Pl. III, fig. 2.]

Types, Inferior Oolite Ammonites

$\frac{3}{4}$ nat. size



P. H. Michael del. et lith.

Ammonites

PLATE II.

Ammonites blagdeni, J. Sowerby, Min. Conch., vol. ii, p. 231, 1818, pl. cci.

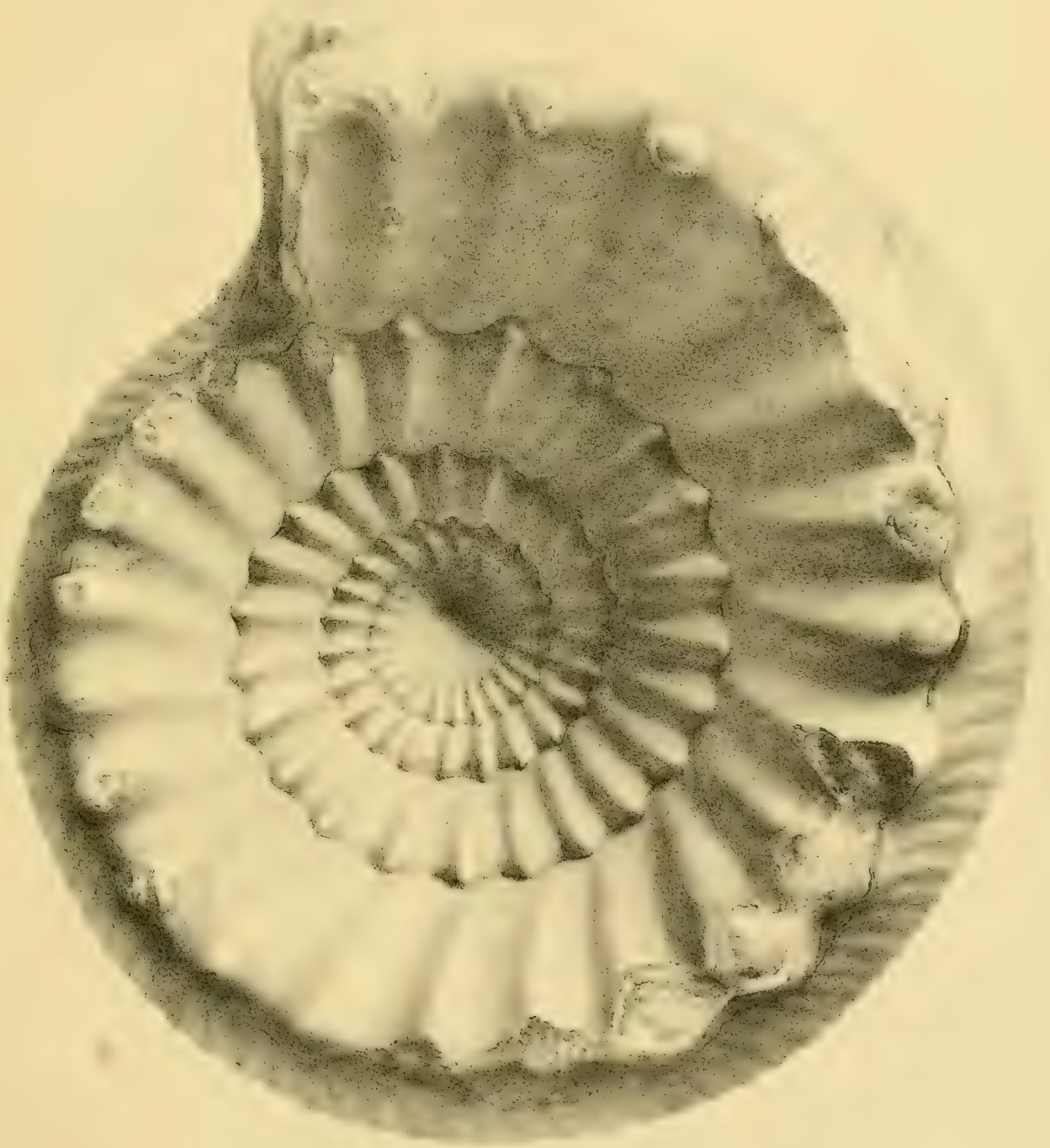
[Brit. Mus. no. 43908.]

“*Specific Characters*.—Subcylindrical, obtusely fluted, umbilicate; umbilicus reaching to the margin, conical, with large radii terminating upon the edge in a tubercle; aperture transverse, quadrangular, three times as wide as long.

“The umbilicus is deep; it occupies the whole side; the tubercles round its edges, about 22 in each turn, are obtuse in the cast of the inside, but where there are some remains of the outer surface they appear to be spiniform, there are four or five furrows on the front to each; the front is very slightly convex.

“A massive specimen from the lower Oolite, containing Belemnites, other Ammonites, etc.: it was given to me by my lamented friend, Dr. J. C. Lettsom. I have named it after the highly discerning, meritorious, yet most unassuming Sir Charles Blagden. The analogy between this and the preceding may remind conchologists of the long cordial friendship subsisting between Sir Charles and Sir Joseph Banks.”

[See also Pl. III, fig. 1.]



1" steel del et lith.

Bale & Danielsson, L^{ds} imp

Ammonites blagdeni

PLATE III.

FIG.

1. *Ammonites blagdeni*, J. Sowerby; front view of specimen, Brit. Mus. no. 43908.
2. *Ammonites banksii*, J. Sowerby; front view of specimen, Brit. Mus. no. 43910.



Side view, nat. size.

Inner whorls, enlarged.

Portion of outer whorl, enlarged.

Ammonites sowerbii, J. Sowerby, Min. Conch., vol. ii, p. 235, 1818, pl. cexiii.

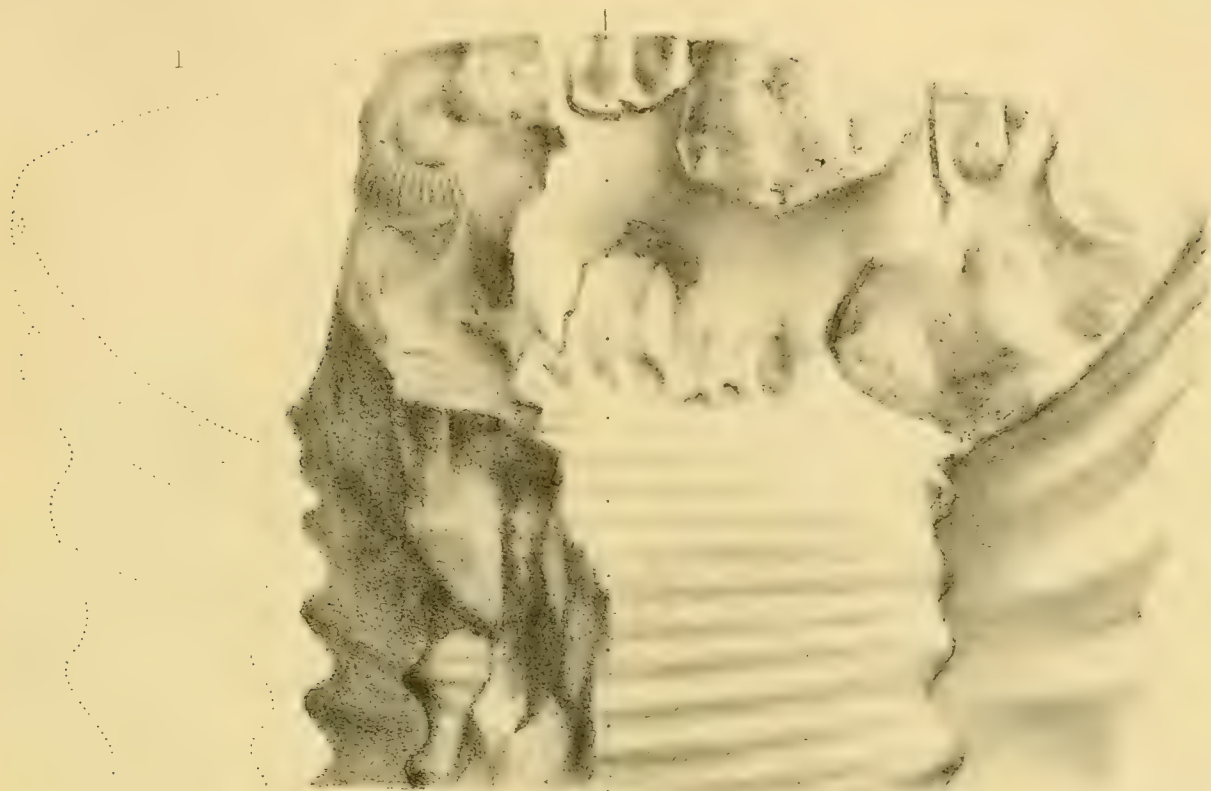
[Bristol Museum.]

“*Specific Characters*.—Discoid, carinated, with about eight spiniform tubercles upon each whorl; keel defined, entire; aperture elliptical. Var. β aperture circular, keel sometimes impressed.

“Volutions about four, the inner ones concealed to the bases of the tubercles; the outer part of the volutions has many gentle undulations; the inner part is even, except that the base of each tubercle is extended towards the centre in an obtuse ridge. The keel nearly separated from the body of the shell; it is round and entire.

“In var. β the ridges from the bases of the tubercles are more prominent, and the keel sometimes so far sunk as to have a furrow on each side of it. The inner whorls of var. α appear to be more gibbose than the outer ones.

“Mr. Miller considers the shell figured as one of his rarest specimens; his collection has also to boast of several smaller specimens, belonging to var. β , which vary in the gibbosity of the whorls; they were all found at Dundry, in the Inferior Oolite.”



1. $\frac{1}{4}$ nat. size

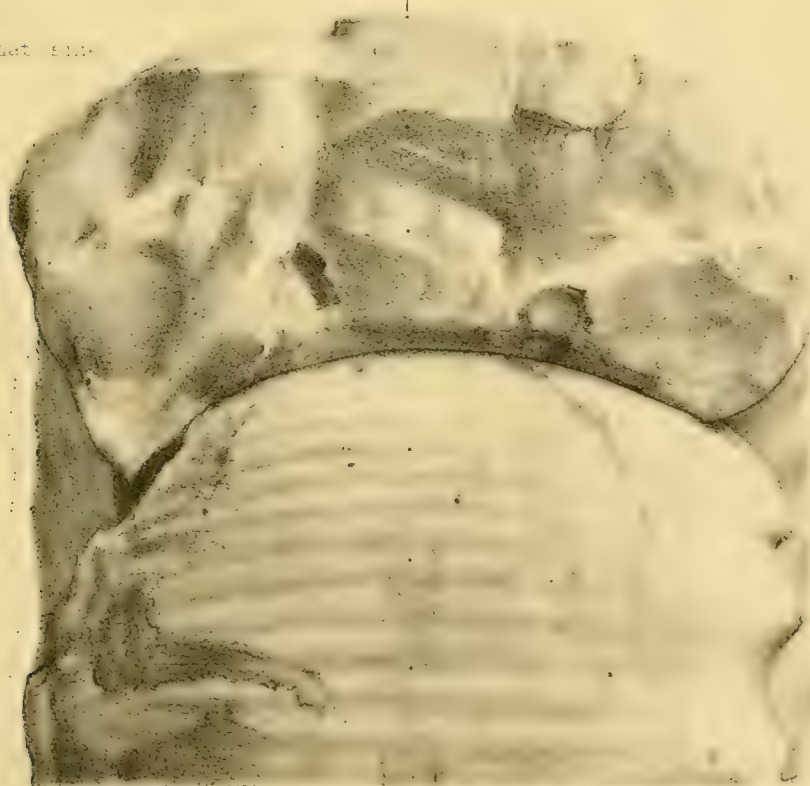


PLATE IV.

Ammonites brocchii, J. Sowerby, Min. Conch., vol. ii, p. 233, 1818, pl. ccii.

[Brit. Mus. no. 43906.]

“*Specific Characters*.—Compressed; sides hollow, radiated; inner whorls half concealed; front circular, with many obtuse ridges; aperture lunate.

“Volutions three or four, very round; twenty radii extending nearly half over them; the rest of their surface is covered by nearly six times as many obtuse, arched, not very prominent ridges. Were the hollow sides considered as umbilicate, the umbilicus would be conical but would have no defined edge; the aperture is lunate, inclining to transversely elliptical. Thickness half the diameter. The septa are remarkably numerous, and finely sinuated.

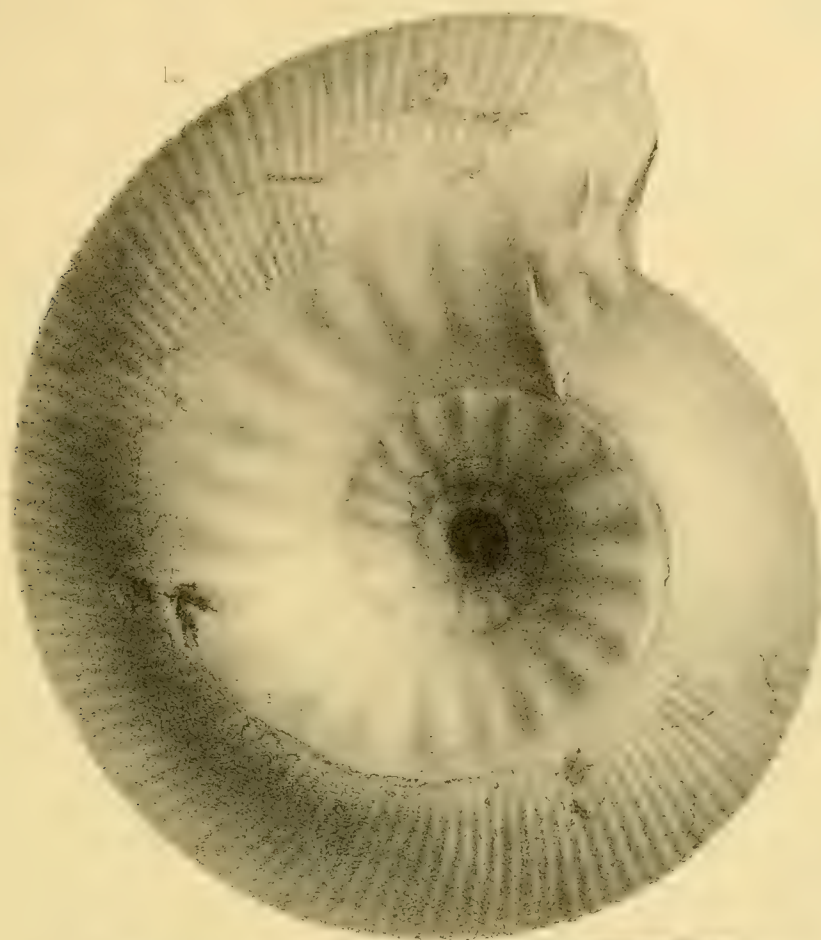
“From the same friend, and probably from the same place, although of a greyer colour, as *A. banksii*, I received the large specimen; it seems to have been exposed to the weather.

“The small specimen is from Dundry, by favour G. W. Braikenridge, Esq.

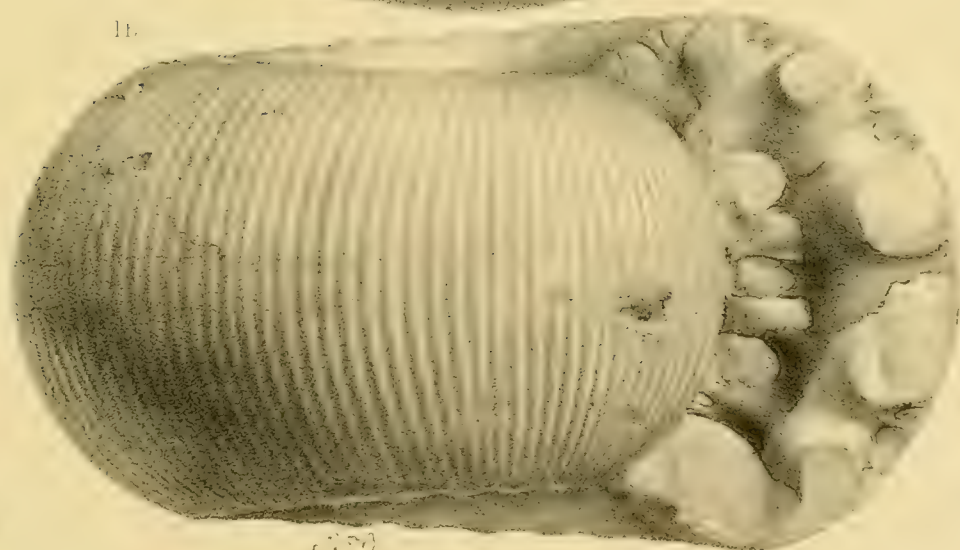
“The name is to commemorate the author of a recent valuable work upon the fossil shells of his own country.”

Types, Inferior Oolite Ammonites.

PL. IV



11.



1c

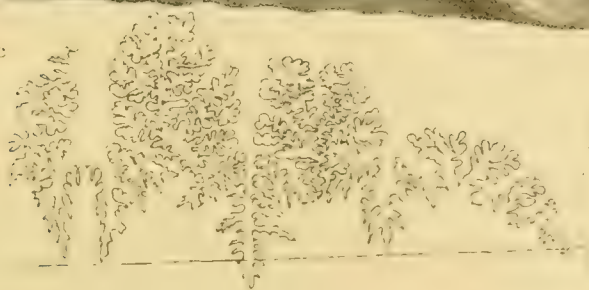


PLATE V.

FIG.

1. *Ammonites brodiaei*, J. Sowerby, Min. Conch., vol. iv, p. 71, 1822, pl. cccli. [Brit. Mus. no. 43905.]

“*Specific Characters*.—Largely umbilicate, gibbose, costated; costæ radiating, large and numerous, terminated upon the sides of the whorls by obtuse tubercles, front rounded, plicated; aperture transversely oblong, curved.

“Somewhat resembling *Ammonites brocchii*, tab. 202, but less gibbose and more strongly marked. The radiating ribs are slightly curved: from each of the tubercles that terminates them proceed about four plaits or lesser ribs, that pass around the front, and meet the tubercles upon the opposite side: this part of the inner volutions is concealed.

“This shell was given me a long while ago, as found on Portland Island, but with some doubt, by my kind and worthy friend, Jas. Brodie, Esq., whose name I wish to perpetuate: from the appearance of the stone I should rather suspect it to have come from the under or Ironshot Oolite.”

[See also Pl. VII, fig. 3.]

FIG.

2. *Ammonites parkinsoni*, J. Sowerby, Min. Conch., vol. iv, p. 1, 1821, pl. ccvii. [Brit. Mus. no. 43925.]

“*Specific Characters*.—Discoid, with numerous highly elevated radii; whorls numerous, the inner ones exposed; radii slightly arched, bifid near the front which is very narrow and plain.

“Volutions numerous, with slightly convex sides and narrow edges: the arched radii are bent forward at their outer ends, and nearly meet at an acute angle upon the front, but do not pass over it: the edge of the shell is nearly flat, in the east it is hollow in consequence of the removal of the siphuncle; the aperture is oblong, narrowest towards the front.

“This is the Ammonite so frequently split, polished, and sold at Bath: its outer surface is also often ground and polished, showing ramifying, sinuated, or simply undulated edges to the septa, according to the depth to which it has been worked. Misled by worked specimens that had lost the flat space in the middle of the edge, I have erroneously referred this species to the *Am. giganteus*, at page 55 of vol. i while speaking of such as are found near Keynsham, and those fine specimens given me by Dr. Lettsom, all of which are flatter than even the variety *a* of the *giganteus*, and have more whorls. The species before us occurs chiefly in Lyas, a stratum not known to contain any silicious deposit; it is consequently never imbedded in Chert or Flint, like the *A. giganteus* *β*. I suspect it also may be found in the lower beds of the Ironshot Oolite, as the specimen now figured is from near Yeovil, and contains vestiges of ferruginous grains. I am indebted to the kind attention of Dr. W. E. Leach for preserving it from the gothic hands of the mason, who is often as destructive of the essential characters of fossils, as some dealers still continue to be of the natural forms of recent shells, and who rob them without mercy of venerable coats that had resisted with various success the combined efforts of numerous sea-born enemies, whose ravages even leave marks more worthy of contemplation than the formal beauty betrayed by the file or polishing brush. . . .

“A section, showing the chambers filled partially with crystallised Carbonate of Lyme, is given at tab. 12 of British Mineralogy. It often extends to 18 inches or more in diameter, and when cut thin and viewed by transmitted light, offers a specious excuse for the unscientific mason.”

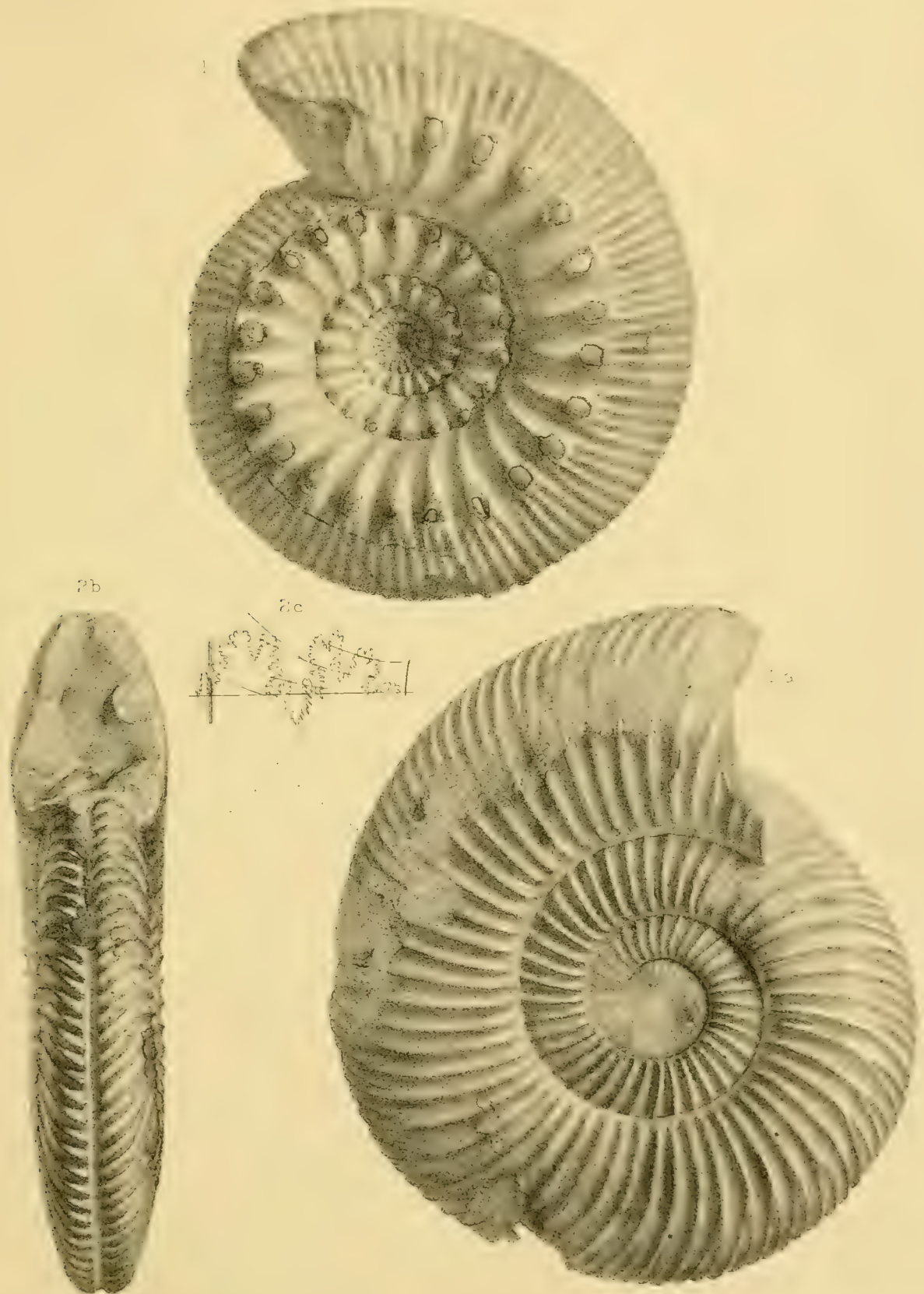


PLATE VI.

FIGS.

- 1, 2. *Ammonites læviusculus*, J. de C. Sowerby, Min. Conch., vol. v, p. 73, 1824, pl. ccccli, figs. 1, 2.
[Brit. Mus. no. 43950 a, b.]

"*Specific Characters*.—Discoid, carinated, umbilicated, obscurely radiated; carina distinct; radii waved, alternately long and short, slightly elevated; umbilicus small, exposing parts of the inner whorls; aperture sagittate.

"One half of the diameter of the shell is occupied by the aperture, a third of the other half by the umbilicus, in full grown individuals; in young ones the umbilicus is larger. The front is obtuse with a large prominent keel in the middle of it; the sides are rather convex marked with waved, elevated radii, that are broader and less conspicuous on the outer whorls of the full grown shells. In young shells the aperture is oblong, rather square; as the shell grows older, the aperture becomes longer, more deeply notched by the preceding whorl, and narrower towards the front.

"Found in the inferior or Ironshot Oolite, at Dundry by G. W. Braikenridge, Esq., to whose liberality we are indebted for a series of specimens."

FIG.

3. *Ammonites subradiatus*, J. de C. Sowerby, Min. Conch., vol. v, p. 23, 1823, pl. cccxxxi, fig. 2.
[Brit. Mus. no. 43943.]

"*Specific Characters*.—Lenticular, umbilicated, carinated, and radiated; radii twice curved, ob[s]cure excepting near the margin, where they are bifid; umbilicus small; keel entire; aperture sagittate.

"The edge of this lenticular Ammonite is rather obtuse, and the carina not much relieved; the sides are nearly smooth, for the curved radii are very obscure excepting near the edge after they have become forked or divided, as some of them are, into three or even four short ribs; the thickness is about one fifth of the diameter.

"Found several years ago on the road from Bath to Bristol; it has been broken out of a mass of the Ironshot Oolite; no other specimen has reached our Cabinet."

FIG.

4. *Ammonites corrugatus*, J. de C. Sowerby, Min. Conch., vol. v, p. 74, 1824, pl. ccccli, fig. 3.
[Brit. Mus. no. 43951a.]

"*Specific Characters*.—Discoid, carinated and umbilicated, strongly radiated; carina distinct; radii waved, sometimes furcated, elevated; umbilicus broad, exposing parts of the inner whorls; aperture obovate; front obtuse.

"Resembling the last [*Ammonites læviusculus*], but thicker, with more prominent radii, and a broader front.

"From Dundry, with the *A. læviusculus*."

FIG.

5. *Ammonites browni*, J. Sowerby, Min. Conch., vol. iii, p. 114, 1820, pl. cclxiii, figs. 4, 5.
[Brit. Mus. no. 43966.]

"*Specific Characters*.—Discoid, with radiating undulations; inner whorls half exposed, with large tubercles upon each side; marginal undulations many, central ones few, rising into tubercles; front rounded with a distinct keel; aperture cordate.

"In general appearance very much like the last [*Ammonites koenigi*], but rather thicker and sufficiently distinguished by the keel and knobs upon the inner volutions.

"From Dundry, by favour of my good friend G. W. Braikenridge, Esq. I wish by the name of this Ammonite to commemorate R. Brown, Esq., a gentleman of general knowledge and an excellent botanist."

types, Inferior Oolite, Ammonites

VI



2. *Ammonites* ...
Ammonites corrugatus ...

PLATE VII.

FIGS.

- 1, 2. *Ammonites humphriesianus*, J. de C. Sowerby, Min. Conch., vol. v, p. 161, 1825, Pl. D, fig. 1. [Brit. Mus. nos. 43908 *a*, *b*.]

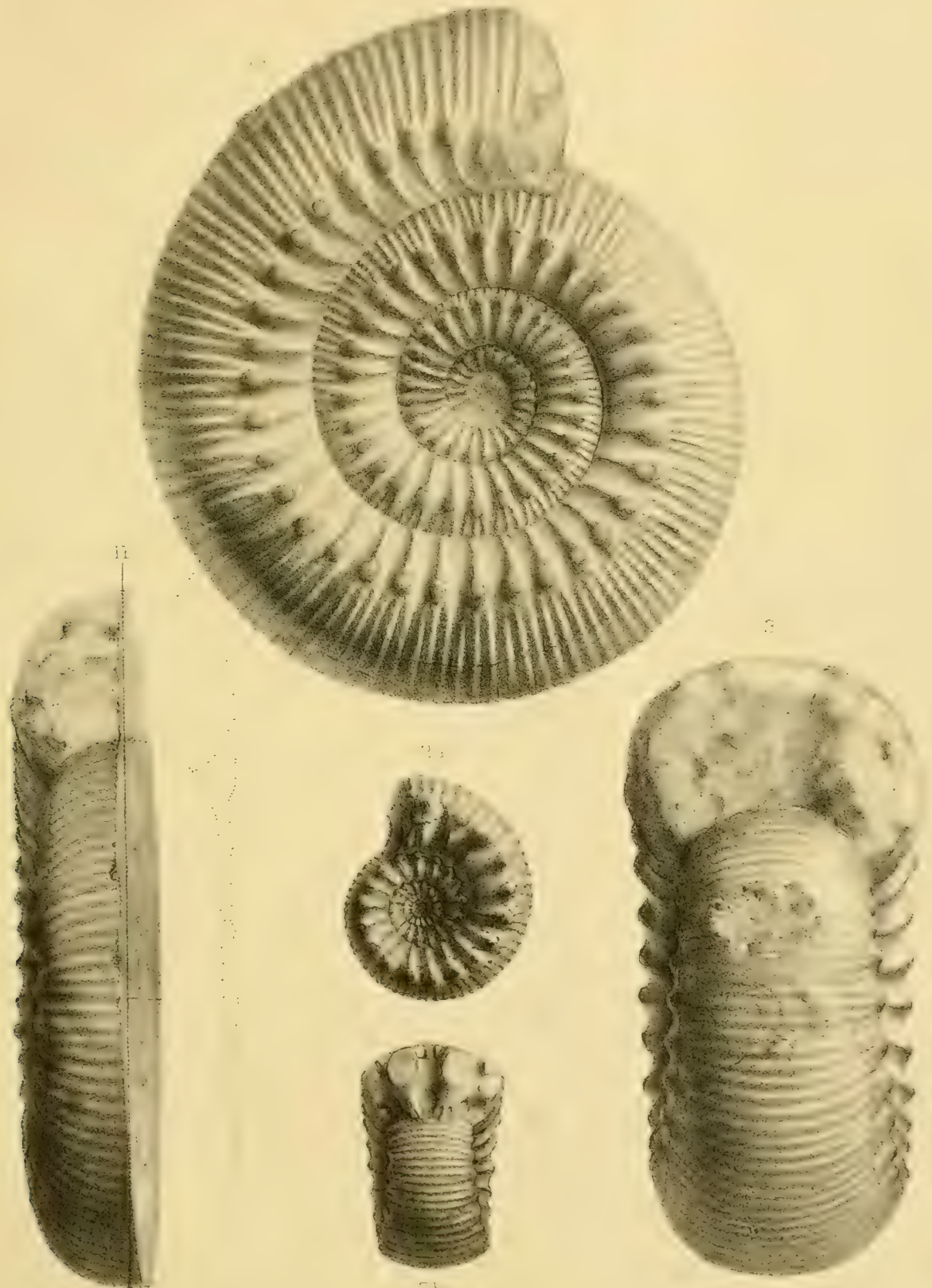
“*Specific Characters*.—Discoid, thick, radiated, inner whorls exposed; front rounded, radii large, numerous, rising into a tubercle on each side of the whorl, where they branch into three; aperture arched, oblong.

“Composed of about four or five whorls, which are almost wholly exposed, more especially the outer ones; the radii are straight, gradually rising towards a conical tubercle, which in the outer whorls occupies about the middle of each side, and is distant from the suture, but in the inner ones is placed close to the suture that separates the turns; the inner whorls have a much flatter front than the outer, whence their sections are quadrangular, whilst the aperture of a large shell is almost lunate.

“The two specimens figured of this Ammonite are from the stock of Mr. George Humphries. They were marked *Sherborne*, and appear to come from the Ironshot or Inferior Oolite: the larger one is only a polished half. The same species occurs abundantly at Bayeux in Normandy of a brighter colour.”

FIG.

3. *Ammonites brodiaei*, J. Sowerby; front view of specimen. Brit. Mus. no. 43905.



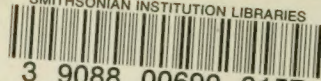
F. H. Michael del et lith.

1, 2. *Ammonites humphresianus*. 3. *Ammonites brodiei*.





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